changes, and the capacity for ecological adaptation (Schliebe et al. 2006a). The 45-year timeframe coincides with the timeframe within which climate model projections are most reliable. This final rule provides a detailed explanation of the rationale for selecting 45 years as the foreseeable future, including its relationship to observed and projected changes in sea ice habitat (as well as the precision and certainty of the projected changes) and polar bear life history and population dynamics. Therefore, this period of time is supported by species-specific aspects of polar bears and the time frame of projected habitat loss with the greatest reliability.

One commenter erroneously identified Congressional intent to limit foreseeable future to 10 years. We reviewed the particular document provided by the commenter-a Congressional Question & Answer response, dated September 26, 1972, which was provided by the U.S. Department of Commerce's National Oceanic and Atmospheric Administration's Deputy Administrator Pollock. Rather than expressing Congressional intent, this correspondence reflects the Commerce Department's perspective at that time about foreseeable future and not Congressional intent. Furthermore, Mr. Pollock's generic observations in 1972 are not relevant to the best scientific data available regarding the status of the polar bear, which has been recognized by leading polar bear biologists as having a high degree of reliability out to 2050.

Issue 2: Changes in Environmental Conditions

Comment 10: An increase in landfast ice will result in increased seal productivity and, therefore, increased feeding opportunities for polar bears.

Our response: We agree that future feeding opportunities for polar bears will in part relate to how climate change affects landfast ice because of its importance as a platform for ringed seal lairs. As long as landfast ice is available, ringed seals probably will be available to polar bears. Research by Rosing-Asvid (2006) documented a strong increase in the number of polar bears harvested in Greenland during milder climatic periods when ringed seal habitat was reduced (less ice cover) and lair densities were higher because seals were concentrated; these two factors provide better spring hunting for polar bears. In contrast to periodic warming, however, climate models project continued loss of sea ice and changes in precipitation patterns in the Arctic. Seal lairs require sufficient snow cover for lair construction and maintenance, and snow cover of adequate quality that persists long enough to allow pups to wean prior to onset of the melt period. Several studies described in this final rule have linked declines in ringed seal survival and recruitment with climate change that has resulted in increased rain events (which has lead to increased predation on seals) and decreased snowfall. Therefore, while polar bears may initially respond favorably to a warming climate due to an increased ability to capture seals, future reductions in seal populations will ultimately lead to declines in polar bear populations. Additional information was added to the section ''Effects of Sea Ice Habitat Changes on Polar Bear Prey'' to clarify this point.

Comment 11: Polar bears will have increased hunting opportunities as the amount of marginal, unconsolidated sea ice increases.

Our response: Marginal ice occurs at the edge of the polar basin pack ice; ice is considered unconsolidated when concentrations decline to less than 50 percent. The ability of polar bears to catch a sufficient number of seals in marginal sea ice will depend upon both the characteristics of the sea ice and the abundance of and access to prey. Loss of sea ice cover will reduce seal numbers and accessibility to polar bears, as discussed in ''Reduced prey availability'' section of this final rule. Even if ringed seals maintained their current population levels, which is unlikely, Harwood and Stirling (2000) suggest that ringed seals would remain near-shore in open water during summer ice recession, thereby limiting polar bear access to them. Benthic (ocean bottom) feeders, such as bearded seals and walruses, may also decrease in abundance and/or accessibility as ice recedes farther away from shallow continental shelf waters. Increased open water and reduced sea ice concentrations will provide seals with additional escape routes, diminish the need to maintain breathing holes, and serve to make their location less predictable and less accessible to polar bears, resulting in lowered hunting success. Polar bears would also incur higher energetic costs from additional movements required for hunting in or swimming through marginal, unconsolidated sea ice. Additional information from Derocher et al. (2004) was added to the section ''Effects of Sea Ice Habitat Changes on Polar Bear Prey'' to clarify this point.

Comment 12: Polar bears will benefit from increased marine productivity as ocean waters warm farther north.

Our response: If marine productivity in the Arctic increases, polar bears may benefit from increased seal productivity initially, provided that sea ice habitat remains available. As previously mentioned, polar bears need sea ice as a platform for hunting. Evidence from Western Hudson Bay, Southern Hudson Bay, and Southern Beaufort Sea populations indicates that reductions in polar bear body condition in these populations are the result of reductions in sea ice. Additional new information on the relationship between body condition, population parameters, and sea ice habitat for the Southern Beaufort Sea population (Rode et al. 2007) has been incorporated into the section on effects of sea ice change on polar bears.

The extent to which marine productivity increases may benefit polar bears will be influenced, in part, by ringed seals' access to prey. Arctic cod (*Boreogadus saida*), which are the dominant prey item in many areas, depend on sea ice cover for protection from predators (Gaston et al. 2003). In western Hudson Bay, Gaston et al. (2003) detected Arctic cod declines during periods of reduced sea ice habitat. Should Arctic cod abundance decline in other areas, we do not know whether ringed seals will be able to switch to other pelagic prey or whether alternate food sources will be adequate to replace the reductions in cod.

Comment 13: Sufficient habitat will remain in the Canadian Arctic and polar region to support polar bears for the next 40–50 years; therefore, listing is not necessary.

Our response: Both the percentage of sea ice habitat and the quality of that habitat will be significantly reduced from historic levels over the next 40–50 years (Meehl et al. 2007; Durner et al. 2007; IPCC 2007). New information on the extent and magnitude of sea ice loss is included previously in the section entitled ''Observed Changes in Arctic Sea Ice'' of this rule. Reductions in the area, timing, extent, and types of sea ice,among other effects, are expected to increase the energetic costs of movement and hunting to polar bears, reduce access to prey, and reduce access to denning areas. The ultimate effect of these impacts are likely to result in reductions in reproduction and survival, and corresponding decreases in population numbers. We agree that receding sea ice may affect archipelagic polar bear populations later than populations inhabiting the polar basin, because seasonal ice is projected to remain present longer in the archipelago than in other areas of the polar bear's range. The high Arctic archipelago is limited however, in its ability to sustain